Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (CANCELED)

2. (CANCELED)

3. (CANCELED)

4. (PREVIOUSLY PRESENTED) A display device, comprising:

a plurality of pixel electrodes;

image signal lines for supplying data signals to said pixel electrodes;

a plurality of scanning signal lines provided so as to intersect said image signal lines;

a driving circuit for outputting a scanning signal to actuate said scanning signal lines;

thin film transistors each having a gate, a source, and a drain which are connected with one scanning signal line, one image signal line, and one image electrode, respectively, said thin film transistors being provided at the intersections of said image signal lines and said scanning signal lines, respectively;

wherein said driving circuit controls falls of the scanning signal; and

wherein said driving circuit controls the slopes of the falls of the scanning signal, based on gate voltage-drain currency characteristics of said thin film transistors.

5. (ORIGINAL) The display device as set forth in claim 4, wherein the falls of the scanning signal are sloped in an ON region of said thin film transistors.

6. (CANCELED)

7. (CURRENTLY AMENDED) A display device, comprising:

a plurality of pixel electrodes;

image signal lines for supplying data signals to said pixel electrodes;

a plurality of scanning signal lines provided so as to intersect said image signal lines;

a driving circuit for outputting a scanning signal to actuate said scanning signal lines;

thin film transistors each having a gate, a source, and a drain which are connected with one scanning signal line, one image signal line, and one image electrode, respectively, said thin film transistors being provided at the intersections of said image signal lines and said scanning signal lines, respectively;

wherein said driving circuit controls falls of the scanning signal;

wherein the scanning signal is composed of a gate-on voltage which causes said thin film transistor to attain an ON state and a gate-off voltage which causes said thin film transistor to attain an OFF state; and

wherein said driving circuit includes:

a shift register section composed of a plurality of flip-flops which are cascaded and to which a scanning timing control signal is supplied;

slope control sections for controlling the slopes of the falls from the gate-on voltage to the gate-off voltage, where each slope control section includes a slew-rate control element; and

switch sections each of which switches the gate-on voltage for the gate-off voltage or vice versa according to an output of each flip-flop.

8. (CANCELED)

9. (CANCELED)

10. (CANCELED)

11. (CANCELED)

12. (CANCELED)

13. (PREVIOUSLY PRESENTED) A display device, comprising:

a plurality of pixel electrodes;

image signal lines for supplying data signals to said pixel electrodes;

a plurality of scanning signal lines provided so as to intersect said image signal lines;

a driving circuit for outputting a scanning signal to actuate said scanning signal lines;

thin film transistors each having a gate, a source, and a drain which are connected with one scanning signal line, one image signal line, and one image electrode, respectively, said thin film transistors being provided at the intersections of said image signal lines and said scanning signal lines, respectively;

wherein said driving circuit controls falls of the scanning signal;

wherein the scanning signal is composed of a gate-on voltage which causes said thin film transistor to attain an ON state and a gate-off voltage which causes said thin film transistor to attain an OFF state; and

wherein said driving circuit includes:

a control section which outputs a charge control signal and a discharge control signal, which both synchronize with each scanning period;

a slope voltage control section which charges up in response to the charge control signal and outputs a slope control voltage, while makes the slope control voltage zero by discharging in response to the discharge control signal; and

a subtracting section which outputs a voltage resulting on subtraction of the slope control voltage from the gate-on voltage during the charging, while outputs the gate-on voltage during the discharge.

14. (ORIGINAL) The display device as set forth in claim 13, wherein the voltage outputted from said subtracting section has a serrature-like waveform.

15. (ORIGINAL) The display device as set forth in claim 13, wherein a minimum value of the voltage outputted from said subtracting section is substantially equal to a threshold voltage of said thin film transistors.

16. (ORIGINAL) The display device as set forth in claim 13, wherein said subtracting section is composed of a differential amplifying circuit including an operational amplifier.

17. (CANCELED)

18. (CANCELED)

19. (PREVIOUSLY PRESENTED) A display method of carrying out display by supplying data signals to a plurality of pixel electrodes through image signal lines and actuating the pixel electrodes by supplying a scanning signal thereto through scanning signal lines which intersect the image signal lines, wherein during the actuation, slopes of the falls of the scanning signal are controlled on the basis of gate voltage-drain currency characteristics of a plurality of thin film transistors provided at the intersections of the image signal lines and the scanning signal lines.

20. (CANCELED)

21. (CURRENTLY AMENDED) A display device, comprising:

a plurality of pixel electrodes;

image signal lines for supplying data signals to said pixel electrodes;

a plurality of scanning signal lines provided so as to intersect said image signal lines;

a driving circuit for outputting a scanning signal to actuate said scanning signal lines;

thin film transistors each having a gate, a source, and a drain which are connected to one scanning signal line, one image signal line, and one pixel electrode, respectively, said thin film transistors being provided at the intersections of said image signal lines and said scanning signal lines, respectively; and

wherein said driving circuit is adapted so as to control a waveform of the scanning signal so that the scanning signal falls at a predetermined slope, where the predetermined slope is established based on one of setting a change rate of the fall of the waveform in a vicinity of an input-side end of the scanning signal line so as to be substantially equal to a change rate of the fall of the waveform in a vicinity of the other end of the scanning signal line, a basis of signal delay transmission characteristics, a basis of a gate-voltage drain currency characteristic of pixel switching elements.

22. (PREVIOUSLY PRESENTED) The display device as set forth in claim 21, wherein the scanning signal falls forming the slope in the waveform all the way from a HIGH to a LOW.

23. (PREVIOUSLY PRESENTED) The display device as set forth in claim 21, wherein the scanning signal falls forming the slope in the waveform part of the way from a HIGH to a LOW.

24. (PREVIOUSLY PRESENTED) The display device as set forth in claim 23, wherein the slope appears in the waveform in an area where said thin film transistors are on.

25. (CURRENTLY AMENDED) A display method of carrying out display ~~by~~ comprising the steps of:

supplying data signals to a plurality of pixel electrodes through image signal lines; ~~and~~

actuating the pixel electrodes by supplying a scanning signal thereto through scanning signal lines which intersect the image signal lines,

wherein during the actuation, control is carried out so that the scanning signal has a waveform falling at a predetermined slope; and

establishing the predetermined slope based on one of setting a change rate of the fall of the waveform in a vicinity of an input-side end of the scanning signal line so as to be substantially equal to a change rate of the fall of the waveform in a vicinity of the other end of the scanning signal line, a basis of signal delay transmission characteristics, a basis of a gate-voltage drain currency characteristic of pixel switching elements.

26. (PREVIOUSLY PRESENTED) The display method as set forth in claim 25, wherein during the actuation, control is carried out so that the scanning signal falls forming the slope in the waveform all the way from a HIGH to a LOW.

27. (PREVIOULSY PRESENTED) The display method as set forth in claim 25, wherein during the actuation, control is carried out so that the scanning signal falls forming the slope in the waveform part of the way from a HIGH to a LOW.

28. (PREVIOUSLY PRESENTED) The display method as set forth in claim 27, wherein during the actuation, control is carried out so that the slope appears in the waveform in an area where a plurality of thin film transistors provided at respective intersections of the image signal lines and the scanning signal lines are on.

29. (PREVIOUSLY PRESENTED) The display device as set forth in claim 4, wherein said driving circuit controls the slopes of the falls of the scanning signal, based on gate voltage-drain currency characteristics of said thin film transistors, and based on a signal transmission delay characteristic.

30. (PREVIOUSLY PRESENTED) The display method as set forth in claim 19, wherein during the actuation, said driving circuit controls the slopes of the falls of the scanning signal, based on gate voltage-drain currency characteristics of said thin film transistors, and based on a signal transmission delay characteristic.

31. (NEW) The display device of claim 4, wherein said driving circuit controls the slopes of the falls of the scanning signal, based on gate voltage-drain currency characteristics of said thin film transistors and so a change rate of the fall of the waveform in a vicinity of an input-side end of the scanning signal line is substantially equal to a change rate of the fall of the waveform in a vicinity of the other end of the scanning signal line.

32. (NEW) The display device of claim 4, wherein said driving circuit includes a mechanism for controlling output impedance, and wherein the output impedance is controlled so as to control the slopes of the falls of the scanning signal.

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33. (NEW) The display device of claim 4, wherein said driving circuit is configured so the slopes of the falls are such that the scanning signal falls part of the way from a HIGH to a LOW.